



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/801,318

03/16/2004

John Scott Heuvel

049220-9007-00

1993

23409 7590 02/22/2008
MICHAEL BEST & FRIEDRICH LLP
100 E WISCONSIN AVENUE
Suite 3300
MILWAUKEE, WI 53202

EXAMINER

KENNY, DANIEL J

ART UNIT

PAPER NUMBER

3633

MAIL DATE

DELIVERY MODE

02/22/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/801,318	Applicant(s) HEUVEL ET AL.	
	Examiner DANIEL KENNY	Art Unit 3633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 4 and 5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>17 June, 2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Species 1 in the reply filed on 11/21/2007 is acknowledged. No grounds for the traversal were given.

Claims 4 and 5 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim.

The requirement is made FINAL.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: second end, 30. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-3, and 8 - are rejected under 35 U.S.C. 102(e) as being anticipated by Copley et al. (7,111,751).

Copley et al. discloses a concrete structural section (floor, 15) for use in construction, the concrete structural section comprising:

Claim 1 – a first end, a second end disposed opposite the first end, and a length extending between the first and second ends;

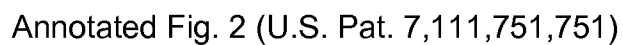
a first side (f) extending along the length of the section from about the first end to about the second end;

a first edge (22) connected to the concrete section and extending along the first side for connecting the concrete section to an adjoining concrete section (14), the first edge being formed from a plastic material.

Claim 2 - a second side (concrete floor inherently has an opposite side) disposed opposite the first side and extending along the length of the section from about the first end to about the second end, and a second edge (also inherently) connected to the concrete section and extending along the second side, the second edge being formed from a plastic material.

Claim 3 - The first edge comprises a lateral portion (lp) adjacent the first side of the concrete section, an extension (ex) extending into the concrete section from the lateral portion, and an anchor portion (ap) disposed at an end of the extension opposite the lateral portion, the first edge being at least partially embedded within the concrete section, the anchor portion having a cross-sectional area greater than the cross-sectional area of the extension.

Claim 8 - the first edge has a cross-section that remains substantially the same as the first section extends along the length of the concrete section.



Lowndes discloses a concrete section assembly comprising:

a first (16) and second (18) concrete section, each section having a first end and a second end disposed opposite one another, a side extending between the first and second ends of the section, a edge (22) connected to the side of each section and extending along the side, the sections aligned with the respective side of each section being adjacent to one another; and

a continuous weld (col. 2, line 64) between the edges of the sections and extending substantially along the length of the sections (col. 2, line 18) from about the first end to the second end.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 2, 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lowndes, III (4,724,649) in view of Rogers (P.G. US 2004/0049995).

Lowndes discloses a concrete structural section (16) for use in construction, the concrete structural section comprising:

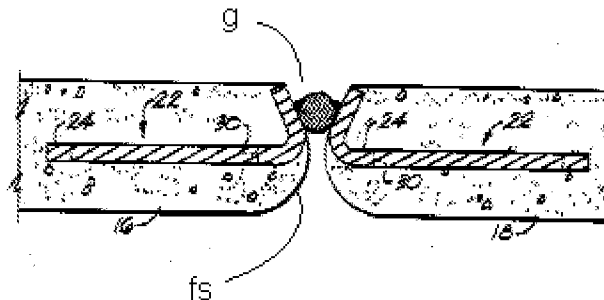
Claims 1 and 2 - a first end, a second end disposed opposite the first end, and a length extending between the first and second ends;

first (fs) and second oppositely disposed sides extending along the length of the section from about the first end to about the second end;

first and second edges (22) connected to the concrete section and extending along the first and second sides respectively, for connecting the concrete section to adjoining concrete sections.

Regarding the claimed plastic edge material, Lowndes discloses that the first edge could be made of a material other than steel (col. 3, line 10), and Rogers discloses interchangeability (para. 24) between metal and plastic material, especially material that is to be later, for example, welded.

It would have been obvious to one of ordinary skill in the art at the time the present invention was made to replace the familiar steel edge of Lowndes with the plastic edge of Rogers because it does no more than yield predictable results of providing corrosion resistance.



Annotated Fig. 1 (U.S. Pat. 4,724,649)

Claim 6 - The concrete section includes a double-tee (col. 3, line 68) having a deck and two legs extending downwardly from the deck.

Claim 8 - The first edge has a cross-section that remains substantially the same as the first section extends along the length of the concrete section.

Claim 3 – is rejected under 35 U.S.C. 103(a) as being unpatentable over Lowndes, III in view of Rogers and in further view of Copley et al.

Copley et al. discloses a concrete section with an edge comprising a lateral portion (lp) adjacent the first side of the concrete section, an extension (ex) extending into the concrete section from the lateral portion, and an anchor portion (ap) disposed at an end of the extension opposite the lateral portion, the first edge being at least partially embedded within the concrete section, the anchor portion having a cross-sectional area greater than the cross-sectional area of the extension.

It would have been obvious to one of ordinary skill in the art at the time the present invention was made to combine the familiar edge of Lowndes, III with the anchor portion type edge of Copley et al. because it does no more than yield predictable result of holding the edge more tightly into the concrete.

Claim 7 – is rejected under 35 U.S.C. 103(a) as being unpatentable over Lowndes, III in view of Rogers, and in further view of Fischer (2,374,186).

Copley does not expressly disclose the first edge having an exposed face facing away from the section and a concealed face facing towards the section and contacting the concrete, the concealed face defining an elongated channel extending at least partially along the length of the section, the elongated channel having an opening and a

base, the opening being narrower than the base and forming an interlocking tongue-and-groove engagement with the 15 concrete section with at least a portion of the concrete disposed within the elongated channel.

Fischer discloses a concrete body (m) with an edge (A, Fig 1 and Fig. 6) having an exposed face facing away from the section and a concealed face facing towards the section and contacting the concrete, the concealed face defining an elongated channel extending at least partially along the length of the section, the elongated channel having an opening and a base, the opening being narrower than the base and forming an interlocking tongue-and-groove engagement with the concrete section with at least a portion of the concrete disposed within the elongated channel.

It would have been obvious to one of ordinary skill in the art at the time the present invention was made to combine the familiar edge of Lowndes with the tongue-and-groove edge of Fischer because it does no more than yield predictable result of keying the edge tightly into the concrete.

Claim 7 – is rejected under 35 U.S.C. 103(a) as being unpatentable over Copley et al. in view of Fischer.

Copley does not expressly disclose the first edge having an exposed face facing away from the section and a concealed face facing towards the section and contacting the concrete, the concealed face defining an elongated channel extending at least partially along the length of the section, the elongated channel having an opening and a base, the opening being narrower than the base and forming an interlocking tongue-

and-groove engagement with the 15 concrete section with at least a portion of the concrete disposed within the elongated channel.

Fischer discloses a concrete body (m) with an edge (A, Fig 1 and Fig. 6) having an exposed face facing away from the section and a concealed face facing towards the section and contacting the concrete, the concealed face defining an elongated channel extending at least partially along the length of the section, the elongated channel having an opening and a base, the opening being narrower than the base and forming an interlocking tongue-and-groove engagement with the concrete section with at least a portion of the concrete disposed within the elongated channel.

It would have been obvious to one of ordinary skill in the art at the time the present invention was made to combine the familiar edge of Copley with the tongue-and-groove edge of Fischer because it does no more than yield predictable result of keying the edge tightly into the concrete.

Claims 9–12 - are rejected under 35 U.S.C. 103(a) as being unpatentable over Lowndes, III in view of Rogers.

Lowndes discloses a joint (Fig. 1) between two pre-formed concrete sections comprising:

Claim 9 - first concrete section (16) having a first side (fs) extending along the first concrete section and a first edge (22) connected to the first side;

a second concrete section (18) having a second side extending along the second concrete section and a second edge connected to the second side, the second concrete

section being positioned adjacent the first concrete section with the first and second edges extending adjacent one another and being substantially evenly spaced from one another along the sections, the first and second edges being formed from a metal material; and a continuous weld (col. 3, lines 4 and 5) extending between the first and second edges and connecting the first section to the second section, the weld being formed from a metal material.

Lowndes does not expressly disclose the first and second edges being formed from a plastic material; and the continuous weld extending between the first and second edges and connecting the first section to the second section being formed from a semi-flexible plastic material. However, Lowndes does allow that the edges may be made of other materials (col. 3, line 10). In fact, Rogers discloses that, in joining adjacent sections by welding, metal and plastic material (for both the sections and the weld) are interchangeable (para. 24).

It would have been obvious to one of ordinary skill in the art at the time the present invention was made to substitute the familiar welded metal edges of Lowndes with the plastic base material/plastic weld combination of Rogers because it does no more than yield predictable results of, for example, adding corrosion resistance.

Claim 10 – Lowndes does not expressly disclose a specific, detailed edge spacing. It would have been obvious to one having ordinary skill in the art at the time of invention to make the blocks to a particular dimensions, since such a modification would have involved a mere change in the size of a component. A change in size is generally

recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955)

Claim 11 - Each section includes a top surface, a bottom surface disposed opposite the top surface, and a groove (g) extending adjacent the respective edge and the top surface, the weld being at least partially disposed within the groove and being vertically below the top surfaces of the sections.

Claim 12 - The weld inherently forms a seal between the first and second edges and resists material from passing between the sections.

Claims 14–19 - are rejected under 35 U.S.C. 103(a) as being unpatentable over Lowndes, III in view of Rogers et al.

Claims 14 and 15 - Lowndes discloses all the claim limitations as described above, including the edges made of a variety of materials (col. 3, line 10). Rogers discloses that plastic and metal materials (and their respective welds) are interchangeable (para. 24).

It would have been obvious to one of ordinary skill in the art at the time the present invention was made to substitute the familiar welded metal edges of Lowndes with the plastic base material/plastic weld combination of Rogers because it does no more than yield predictable results of, for example, adding corrosion resistance.

Claim 16 - The plastic weld taught by Rogers is semi-flexible as broadly recited.

Claim 17 - Lowndes does not expressly disclose a specific, detailed edge spacing. It would have been obvious to one having ordinary skill in the art at the time of invention to make the blocks to a particular dimensions, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955)

Claim 18 - Each section has a deck the decks of each section being substantially co-planar with one another.

Claim 19 – A recessed groove (g) disposed between the sections and being at least partially defined by the sides, the edges and the weld.

Claims 20 and 21 - are rejected under 35 U.S.C. 103(a) as being unpatentable over Lowndes, III in view of Rogers et al. Claims 20 and 21 are an obvious method of using the section assembly of Lowndes, III modified by Rogers et al.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL KENNY whose telephone number is (571)272-9951. The examiner can normally be reached on Monday thru Friday, 9 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Chilcot can be reached on (571) 272-6777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeanette E Chapman/
Primary Examiner, Art Unit 3633

/D. K./
Examiner, Art Unit 3633

2/13/2008